Project Initialization and Planning Phase

Date	JUNE 2024
Team ID	739708
Project Title	EcoForecast:AI- powered prediction of carbon monoxide levels
Maximum Marks	3 Marks

Project Proposal (Proposed Solution) template

This project proposal outlines a solution to address a specific problem. With a clear objective, defined scope, and a concise problem statement, the proposed solution details the approach, key features, and resource requirements, including hardware, software, and personnel.

Project Overview	
Objective	The objective of AI-powered prediction of carbon monoxide levels is to leverage advanced machine learning algorithms and data analytics to accurately forecast the concentration of carbon monoxide in various environments
Scope	By utilizing AI to predict carbon monoxide levels, this system aims to create a safer and healthier environment, support informed decision-making, and contribute to the development of smart, sustainable cities.
Problem Statement	
Description	The AI-powered prediction system for carbon monoxide (CO) levels is designed to provide real-time and forecasted data on CO concentrations in various environments. By leveraging advanced machine learning techniques ,this system aims to enhance public health and safety, improve environmental monitoring, and support proactive decision-making.
Impact	(CO) levels has significant impacts across various domains. In public health, it enables proactive measures to minimize exposure to harmful CO levels, thereby reducing respiratory and cardiovascular issues and lowering healthcare costs. this initiative drives innovation in AI and data science, providing valuable data for further research.

Proposed Solution	
Approach	The approach to developing an AI- First, data collection is crucial, gathering historical CO it is deployed in a production environment with an API for real-time predictions. Continuous monitoring and maintenance ensure the model levels, meteorological data, traffic information, and industrial emissions. Model retraining will be essential to maintain accuracy.

Key Features	Real-time Prediction: These predictions are made available through an API, allowing integration with dashboards and alert systems for stakeholders. Adaptive Learning: The model will continually learn from new data, improving its accuracy. Scalability: Designed to handle large volumes of transactions without compromising performance.

Resource Requirements

Resource Type	Description	Specification/Allocation
Hardware		
Computing Resources	CPU/GPU specifications, number of cores	e.g., 2 x NVIDIA V100 GPUs
Memory	RAM specifications	e.g., 8 GB
Storage	Disk space for data, models, and logs	e.g., 1 TB SSD
Software		
Frameworks	Python frameworks	e.g., Flask , sklearn , metrics
Libraries	Additional libraries	e.g., scikit-learn, pandas, numpy
Development Environment	IDE, version control	e.g., s, Git , spyder, Google co lab
Data		

Data	Source, size, format	e.g., Kaggle dataset, 500 images , CSV